

REMARKS

Claims 1 – 3, 5, 6, 8 – 11, 14, 16 – 18, 21, 23, 26, 27, 30, 32 – 45, 48, 49 and 51 - 66 are pending in the instant application. Claims 1 –3, 5, 6, 8 –11, 14, 16 –18, 21, 23, 26, 27, 30, 32 – 41, 45, 49, 51 – 53 and 58 – 60 are allowed. Claims 42 – 44, 48, 54 – 57, 61, 62 and 64 – 66 are rejected. Claims 44, 48 and 62 are canceled without prejudice by this amendment to reduce the issues. Claims 61 and 66 are amended by this amendment to more positively recite the patentably novel method of the invention.

The Office Action alleges that newly submitted claim 63 is directed to an invention that is independent or distinct from the invention originally claimed. The Office Action alleges that in originally filed claim 45 the applicants claimed an article comprising a substrate, antimony doped tin oxide layer, and fluorine doped tin oxide layer and that in current claim 63 the applicants claim an article comprising a substrate, antimony doped tin oxide layer and an indium doped tin oxide layer. The Office Action continues by stating that since applicants have received an action on the merits for the originally present invention (species), this invention has been constructively elected by original presentation for prosecution on the merits and accordingly, claim 63 is withdrawn from consideration as being directed to a non-elected invention.

Applicants acknowledge the withdrawal of claim 63 and have identified claim 63 accordingly.

Claim 61 is objected to because in line 9, it appears that “multiplayer” should read --multiplayer--. Applicants have amended claim 61 at line 9 by deleting “multiplayer” and inserting --multi-layer--. Applicants respectfully submit that the amendment to claim 61 does not add new subject matter, and request admission and consideration of amended claim 61 and withdrawal of the objection of claim 61.

Claim 66 is objected to under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim, i.e. claim 61. Claims 61 and 66 are amended and discussed below. Applicants submit that the amendments to claims 61 and 66 overcome the objection to claim 66.

Claims 42, 43, 54 – 57, 64 and 65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claim 43 is dependent on claim 42; claims 55 – 57, 64 and 65 are either directly or indirectly dependent on claim 54. The patentability of claims 42 and 43, and of claims 54 – 57, 62, 64 and 65 are discussed separately.

The Office Action, in general, states that in claim 42, the applicants claim substantially no second metal oxide in the first coating region and substantially no first metal oxide in the third coating region. The Office Action continues by alleging that the applicants claim support for these amendments in the originally filed claims and that no specific support is found in the originally filed claims or in the originally filed specification.

Applicants respectfully traverse the rejection of claims 42 and 43, and request reconsideration thereof.

Applicants in the amendment filed October 3, 2003, stated that support for the amendment to claim 42 is found, among other places, in the originally filed claim 42. However, in view of the Office Action requiring specific support for the negative limitations in claim 42, applicants direct attention to page 13, lines 15 – 35, of the specification and to U.S. Patent No. 5,356,718 to Athey et al. (hereinafter also referred to “Athey”) which patent disclosure is incorporated by reference into the instant specification. A copy of Athey is not provided because Athey is of record in the instant application and is cited as prior art in the Office Action.

Athey in column 4, line 50, to column 5, line 25, discloses a graded coating of silicon oxide and a metal oxide such as tin oxide (col. 4, lines 61 and 62). At the glass-coating interface 16 (Fig. 1 of Athey), the composition of the coating is predominantly silicon oxide while at the opposite surface 18 the composition of the coating is predominately tin oxide (col. 4, line 65, to col. 5, line 4). Between the glass-coating interface 16 and opposite surface 18 the coating is composed of continuously varying amounts of silicon oxide and tin oxide as the distance from the glass-coating interface increases (col. 5, lines 11 – 15). The opposite surface 18 is predominantly tin oxide, i.e.

the weight percent of silicon oxide in the outermost region approaches zero and the weight percent of tin oxide approaches 100 (col. 5, lines 22 –25).

Further Athey discloses that the weight percent of one oxide, e.g. silicon oxide in the outermost region approaches zero and the weight percent of the other oxide, e.g. tin oxide approaches 100 (col. 5, lines 22 –25, of Athey). The specification at page 15, lines 29 – 34, states that

A layer is “graded” when the layer has a substantially increasing fraction of one or more components and a substantially decreasing fraction of one or more other components when moving from the top surface to the bottom surface or vice versa.

Applicants respectfully submit the above disclosure in the specification and in Athey, which is incorporating into the specification by reference discloses a first coating region having the first metal oxide and substantially no second metal oxide; a transition region having the first metal oxide and the second metal oxide, with the ratio of the first metal oxide to the second metal oxide constantly changing with distance from the substrate, and a third coating region having the second metal oxide and substantially no first metal oxide. Applicants respectfully submit that the exact language recited in the specification is preferably recited in the claims, but is not required to be recited in the claims.

Based on the forgoing, applicants respectfully request withdrawal of the rejection of claims 42 and 43 under 35 U.S.C. 112, first paragraph, and request allowance thereof.

Regarding claims 54 – 57, 64 and 65, the Office Action, in general, states that in claim 54, the applicants claim that the first coating region is substantially free of the second dopant and that the third region is substantially free of the first dopant. Claim 54 recites, among other things, a second coating region having a first dopant and a second dopant, a first coating region substantially free of the second dopant and a third coating region substantially free of the first dopant.

Support for claims 54 – 57, 64 and 65 is found, among other places, in the specification and in Athey, which is incorporating into the specification by reference on page 13, lines 28 –30. More particularly, the

specification at page 33, lines 27 - 29, states that " Fig. 5 shows the theoretical light transmission from a graded layer, antimony-doped tin oxide and fluorine -doped tin oxide coating." The specification at page 15, lines 29 – 34, states that

A layer is "graded" when the layer has a substantially increasing fraction of one or more components and a substantially decreasing fraction of one or more other components when moving from the top surface to the bottom surface or vice versa.

The specification at page 13, lines 28 – 30, states that "A suitable method of making such a gradient layer is disclosed in U.S. Patent No. 5,356,718, herein incorporated by reference." Athey using mixed metal oxides in an example of a gradient layer discloses that at the glass-coating interface 16 (Fig. 1 of Athey), the composition of the coating is predominantly silicon oxide while at the opposite surface 18 the composition of the coating is predominately tin oxide (col. 4, line 65, to col. 5, line 4). Between the glass-coating interface 16 and opposite surface 18 the coating is composed of continuously varying amounts of silicon oxide and tin oxide as the distance from the glass-coating interface increases (col. 5, lines 11 – 15). The opposite surface 18 is predominantly tin oxide, i.e. the weight percent of silicon oxide in the outermost region approaches zero and the weight percent of tin oxide approaches 100 (col. 5, lines 22 –25).

Combining the above disclosures, the composition of the coating is predominantly an antimony doped tin oxide while at the opposite surface the composition of the coating is predominately fluorine doped tin oxide. Between the glass-coating interface and the opposite surface, the coating is composed of continuously varying amounts of antimony dopant and fluorine dopant as the distance from the glass-coating interface increases. The opposite surface is predominantly fluorine-doped tin oxide, i.e. the weight percent of antimony in the outermost region approaches zero and the weight percent of fluorine approaches 100. In the foregoing example, fluorine and antimony dopants can be exchanged.

Based on the foregoing, applicants respectfully submit that the specification provides support for claims 54 – 57, 62, 64 and 65, and request

withdrawal of the rejection of claims 42, 43, 54 – 57, 62, 64 and 65 under 35 U.S.C. 112, first paragraph, and request allowance thereof.

Claims 61 and 66 are rejected under 35 U.S.C. 112, second paragraph. The Office Action alleges that the applicants have failed to clarify how the thicknesses of the first and second layers of the article can be increased or decreased. The Office Action concludes by alleging that the limitation, as currently written, adds no patentable weight to the current claim drawn to a method of forming an article.

Applicants respectfully traverse the objection to claim 66 discussed above and the rejection of claims 61 and 66 under 35 U.S.C. 112, second paragraph, and request reconsideration thereof. Applicants respectfully submit that claims are to be given their broadest reasonable interpretation consistent with the specification (see M.P.E.P. 2111). Therefore the steps of claim 61 are to be read as “practice one step after the other step”, “the steps practiced in any sequence” or “steps practiced simultaneously.” The specification on page 33, lines 17 – 27, discloses that during the coating step the thickness of the coatings layers are altered to provide the coated article with different optical properties. Therefore claim 61 given its broadest reasonable interpretation consistent with the specification is read that during the practice of the depositing step the increasing step is practiced before the decreasing step.

Applicants have amended claim 61 to more positively recite the invention and amended claim 66 to be consistent therewith. Applicants respectfully submit that claims 61 and 66 were given their broadest meaning and are rejected under 35 U.S.C. 103(a) discussed below. Applicants in the discussion below do not rely on the depositing step to patentably distinguish claims 61 and 66 over the art. Therefore, the amendments to claims 61 and 66 do not require any additional search.

Based on the foregoing, applicants respectfully submit that the amendments to claims 61 and 66 do not add new subject matter, and request admission of the amendments to, and consideration of, claims 61 and 66, and withdrawal of the objection to claim 66 and the rejection of claims 61 and 66 under 35 U.S.C. 112, second paragraph.

Claims 61 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,218,018 to McKown (hereinafter also referred to as "McKown") as applied to now canceled claim 48 in view of Athey.

Applicants respectfully traverse the rejection of claims 61 and 66 under 35 U.S.C. 103(a) as being unpatentable over McKown in view of Athey and request reconsideration thereof.

Claims 61 and 66 and Athey were discussed above.

The Office Action alleges that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a gradient color suppression layer, as disclosed by Athey, as the color suppression layer of McKown, because such a gradient layer suppresses undesirable iridescence. Applicants respectfully submit that one skilled in the art would not combine McKown and Athey or vice versa. McKown states in the ABSTRACT at lines 11 – 17 that in the practice of his invention a separate iridescence color suppression layer as described in the prior art is generally not needed to achieve a neutral appearance. Further in the BACKGROUND OF INVENTION at lines 11 and 12, McKown states that his invention avoids the need for an anti-iridescence underlayer.

Applicants respectfully submit that McKown teaches away from the deposition of a color suppression layer as recited in claim 61.

The Office Action states that Athey does not specifically mention the thickness of the color suppression layer, but McKown discloses that a color suppression layer may have a thickness between 50 to 3000A (column 2, lines 19 – 38). Column 2, lines 19 – 38, of McKown discusses a prior art patent other than Athey. Further applicants have found no discussion in column 2, lines 19 – 38, of McKown of a color suppression layer having a thickness of 50 to 3000A. Even if there was such a discussion in column 2 of McKown, the combination of art by the Office Action would include McKown that teaches away from an anti-iridescence layer combined with Athey that discusses a gradient color suppression layer combined with other unknown prior art reference that teaches the thickness recited in applicants' claim 61. Based on the foregoing the combination of the prior art to reject claims 61 and

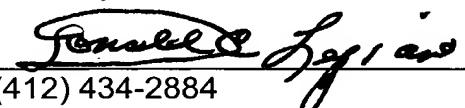
66 is clearly made using hindsight and therefore is an improper rejection of claims 61 and 66.

Based on the foregoing, applicants respectfully request withdrawal of the rejection of claims 61 and 66 under 35 U.S.C. 103(a) as being unpatentable over McKown in view of Athey, and request allowance of claims 61 and 66.

This amendment represents a sincere effort to place the application in condition for allowance. In the event issues remain, the Examiner is invited to call the undersigned to discuss those issues before further action is taken on the case.

Respectfully submitted,

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